

an end effector assembly at the distal end of the device, wherein the end effector assembly includes a first jaw and a second jaw, the first jaw being pivotally disposed and having a serrated edge surface;

an actuator at the proximal end of the device; and

a hollow portion connecting the end effector assembly and the actuator, wherein the actuator operates to pivot the first jaw and move the serrated edge surface of the first jaw into contact with the second jaw.

23. The device according to claim 22, wherein the second jaw is pivotally disposed.

24. The device according to claim 23, further comprising a clevis pin, wherein the first and second jaws are pivotally disposed on the clevis pin.

25. The device according to claim 22, wherein the serrated edge surface of the first jaw includes teeth.

26. The device according to claim 25, wherein the teeth are ^{now}radially disposed on the edge surface of the first jaw.

27. The device according to claim 25, wherein the teeth have a substantially triangular shape.

28. The device according to claim 22, wherein the second jaw has a serrated edge surface.

29. The device according to claim 28, wherein the serrated edge surface of the first jaw mates with the serrated edge surface of the second jaw.

30. The device according to claim 28, wherein the serrated edge surface of each of the first and second jaws includes teeth.

31. The device according to claim 28, wherein the teeth of the first and second jaws have a substantially triangular shape.

32. The device according to claim 30, wherein the teeth are radially disposed on the edge surfaces of the first and second jaws.

33. The device according to claim 30, wherein the teeth of the first and second jaws mate.

le. 5,
24. The device according to claim 33, wherein the teeth of the first jaw are displaced by one half pitch from the teeth of the second jaw.

7.
~~35.~~ The device according to claim ~~22~~¹, wherein the first and second jaws have a generally elongated hemispherical shape.

8.
~~36.~~ The device according to claim ~~22~~¹, wherein the first jaw has a tang defining a first bore.

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37. The device according to claim 36, further comprising a first pull wire positioned within the hollow portion the first pull wire connecting the first jaw to the actuator.

38. The device according to claim 37, wherein the first pull wire engages the first bore and terminates without forming a loop.

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39. The device according to claim 37, further comprising a second pull wire connecting the second jaw to the actuator.


40. The device according to claim 39, wherein the second jaw has a tang defining a bore and the second pull wire engages the second bore and terminates without forming a loop.

13.
~~41.~~ The device according to claim ~~36~~¹⁰, wherein the actuator includes a handle being coupled to the first and second pull wires.

^{14,}
~~42.~~ The device according to claim ~~44~~^{13,} wherein the handle includes a central shaft and a spool slidably disposed around the central shaft, the spool engaging the first and second pull wires, the spool operable to move the first and second pull wires relative to the central shaft.

^{19.}
~~43.~~ The device according to claim ~~22~~¹¹, wherein the hollow portion is a coil.

^{20.}
~~44.~~ The device according to claim ~~22~~¹¹, further comprising a needle disposed between the first and second jaws.


~~45.~~ The device according to claim 44, wherein the needle has a pointed end.

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~~46.~~ An end effector assembly for use in a biopsy forceps device including an actuator at a proximal end of the device and a hollow portion connecting the actuator to the end effector assembly, the end effector assembly comprising:

a pivotally disposed first jaw having a serrated edge surface; and

a second jaw for mating with the first jaw.

only 2 jaws structure to make them pivotally disposed not effector

~~47.~~ The assembly according to claim 46, wherein the second jaw is pivotally disposed.

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✓ 48. The assembly according to claim 47, further comprising a clevis pin, wherein the first and second jaws are pivotally disposed on the clevis pin.

✓ 49. The assembly according to claim 46, wherein the serrated edge surface of the first jaw includes teeth.

✓ 50. The assembly according to claim 49, wherein the teeth are radially disposed on the edge surface of the first jaw. *How*

1 Sub C7
✓ 51. The assembly according to claim 49, wherein the teeth have a substantially triangular shape.

✓ 52. The assembly according to claim 46, wherein the second jaw has a serrated edge surface.

✓ 53. The assembly according to claim 52, wherein the serrated edge surface of the first jaw mates with the serrated edge surface of the second jaw.

✓ 54. The assembly according to claim 52, wherein the serrated edge surface of each of the first and second jaws includes teeth.

55. The assembly according to claim 54, wherein the teeth of the first and second jaws have a substantially triangular shape.

56. The assembly according to claim 54, wherein the teeth are radially disposed on the edge surfaces of the first and second jaws.

57. The assembly according to claim 54, wherein the teeth of the first and second jaws mate.

28. 58. The assembly according to claim 57, wherein the teeth of the first jaw are displaced by one half pitch from the teeth of the second jaw.

29. 59. The assembly according to claim 46, wherein the first and second jaws have a generally elongated hemispherical shape.

30. 60. The assembly according to claim 46, wherein the first jaw has a tang defining a first bore for receiving a first pull wire.

61. The assembly according to claim 46, wherein the second jaw has a tang defining a bore for receiving a second pull wire.